interposed between the tip surface of the holding portion **2***c* of the manipulation knob **2** and the tip surface of the first bearing **1***b* of the body **1**. The resilient force of the resilient member **9** urges the manipulation knob **2** outward (upward). The manipulation knob **2** thus urged can not only rotate but also move in the axial direction of the rotary shaft **3** together with the rotary shaft **3**.

[**0068**] A motor **4** has a generally cylindrical base portion **4***a*, a motor shaft **4***b* that projects upward from the base portion **4***a*, and a second gear **4***c* (spur gear) that is attached to the motor shaft **4***b*. One end portion of the base portion **4***a* is attached to the fixing hole **1***f* by a proper means, and the motor shaft **4***b* projects outward from the fixing hole **1***f*.

[**0069**] The second gear **4***c* is smaller in diameter than the first gear **2***f*. When the motor **4** is attached to the body **1**, the second gear **4***c* of the motor **4** is located inside the first gear **2***f* of the manipulation knob **2**, oriented parallel with it, and engaged with it. The motor shaft **4***b* of the motor **4** is parallel with the rotary shaft **3** of the manipulation knob **2**.

[**0070**] With the above structure, a haptic sense generated by the motor **4** is transmitted to the manipulation knob **2** via the second gear **4***c* and the first gear **2***f* that are in mesh.

[**0071**] Since the motor **4** rotates the manipulation knob **2** via the second gear **4***c* and the first gear **2***f* that are in mesh, the torque that is transmitted from the motor **4** to the manipulation knob **2** can easily be changed by changing the gear ratio between the gears **4***c* and **2***f*. Therefore, even if the motor **4** generates a prescribed, relatively low torque, high torque can be given to the manipulation knob **2**; the motor **4** can be miniaturized.

[**0072**] A third gear **5** is made of a synthetic resin and is formed by molding. The third gear **5** is composed of a spur gear **5***a* and a support shaft **5***b* that projects from the center of the spur gear **5***a* perpendicularly to the spur gear **5***a*.

[**0073**] The third gear **5** is attached to the body **1** rotatably in such a manner that the support shaft **5***b* is inserted in the second bearing **1***c* of the body **1**. The tip portion of the support shaft **5***b* projects downward from the second bearing **1***c*.

[**0074**] The third gear **5** deviates from the second gear **4***c* by 120° about the center of the first bearing **1***b*. The spur gear **5***a* of the third gear **5** is smaller in diameter than the first gear **2***f* and is located inside the first gear **2***f*. The spur gear **5***a* is parallel with the first gear **2***f* and is engaged with it.

[**0075**] When the third gear **5** is attached to the body **1**, the spur gear **5***a* is engaged with the first gear **2***f* of the manipulation knob **2**. Therefore, the spur gear **5***a* of the third gear **5** rotates as the first gear **2***f* rotates.

[**0076**] A fourth gear **7** is made of a synthetic resin and is formed by molding. The fourth gear **7** is composed of a spur gear **7***a* and a support shaft **7***b* that projects from the center of the spur gear **7***a* perpendicularly to the spur gear **7***a*. The support portion **7***b* of the fourth gear **7** is attached to the top wall **1***a* of the body **1** rotatably by a proper means.

[**0077**] The fourth gear **7** deviates from the second gear **4***c* by 120° about the center of the first bearing **1***b*. The spur gear **7***a* of the fourth gear **7** is smaller in diameter than the first gear **2***f* and is located inside the first gear **2***f*. The spur gear **7***a* is parallel with the first gear **2***f* and is engaged with it.

[**0078**] That is, the second gear **4***c*, the third gear **5**, and the fourth gear **7** are located at the respective apices of an equilateral triangle whose center is located on the axis of the first bearing **1***b* and the rotary shaft **3** that is inserted in the first bearing **1***b*.

[**0079**] Each of the spur gears of the second, third, and fourth gears **4***c*, **5**, and **7** is engaged with the first gear **2***f* that is an internal gear and, as mentioned above, the second, third, and fourth gears **4***c*, **5**, and **7** are located at the respective apices of an equilateral triangle. The first gear **2***f* is pulled toward the fourth gear **7** by the fourth gear **7** itself. Therefore, the second gear **4***c* and the third gear **5** rotate while being engaged with the first gear **2***f* (internal gear) reliably, and hence the first gear **2***f* rotates without slipping.

[**0080**] A coding member **6** is composed of a disc-shaped rotator **6***a*, a support shaft **6***b* that extends upward from the center of the rotator **6***a* perpendicularly to the rotator **6***a* and that supports the rotator **6***a*, and a plurality of (e.g., 40) slits **6***c* that are formed in the rotator **6***a* so as to extend in the radial direction and be arranged concentrically with the support shaft **6***b*.

[**0081**] The tip portion of the support shaft **5***b* of the third gear **5** is inserted in the support shaft **6***b* of the coding member **6** and fixed to the support shaft **5***b* by a proper means (e.g., by screwing), whereby the coding member **6** can rotate on the support shaft **6***b*. With this structure, the coding member **6** is rotated (manipulated) by rotation of the third gear **5**.

[**0082**] A printed wiring board **10** is such that a prescribed circuit pattern (not shown) is formed on at least one of the surfaces of a single flat plat board. The printed wiring board **10** is attached to the support portion **1***g* of the body **1** by screwing, for example, and is thus provided in the body **1**.

[**0083**] A photointerrupter **13** is composed of a base portion **13***a*, a light-emitting element **13***b* that is attached to the base portion **13***a*, and a photodetector **13***c* that is attached to the base portion **13***a* so as to be opposed to the light-emitting element **13***b*. The photointerrupter **13** has a function that light that is emitted by the light-emitting element **13***b* is detected by the photodetector **13***c*.

[**0084**] The photointerrupter **13** is provided in such a manner that the rotator **6***a*, having the slits **6***c*, of the coding member **6** is interposed between the light-emitting element **13***b* and the photodetector **13***c*. As the rotator **6***a* of the coding member **6** rotates, the photodetector **13***c* intermittently detects light that is emitted by the light-emitting element **13***b*.

[**0085**] That is, the photointerrupter **13** and the coding member **6** constitute a light transmission type encoder as a rotation detecting means for detecting a rotation angle of the manipulation knob **2**.

[**0086**] The photointerrupter **13** is mounted on the printed wiring board **10** and is connected to the circuit pattern formed thereon.

[**0087**] A push-button switch **11** is composed of a base portion **11***a* and a push button **11***b* that projects upward from the base portion **11***a*. The push-button switch **11** is provided at such a position that the push button **11***b* is opposed to the tip portion of the rotary shaft **3**.